Tornatina canaliculata (Say). Fairly common at 5.
Cylichna oryza (Totten). Several specimens at 5.
Melampus lineatus Say. Most common at 2.
Alexia myosotis (Drap.) Fairly common at 3.

On a tramp up and down the western end of Long Beach point, Long Island, I picked up the following interesting forms, besides forty-eight of the commoner species:

Yoldia limatula (Say). 1 valve.
Arca ponderosa Say. 3 valves.
Astarte castanea (Say). Common.
Tellina tenella (Verrill). 1 valve.
Tellina versicolor De Kay. 2 valves.
Barnea costata (Linné). 1 valve (fragment).
Cavolina telemus (Linné). 1 specimen.

DESCRIPTION OF A NEW SPECIES AND VARIETY OF PLANORBIS FROM POST-GLACIAL DEPOSITS.*

BY FRANK C. BAKER.

Planorbis parvus urbanensis n. var. Pl. VII, figs. 4-6.

Shell differing from *parvus* by having a round aperture, the last third of the body whorl being depressed below the general level of the spire, deeper sutures, channelled in most individuals, and a deeper umbilical region. The body whorl has not quite as great transverse diameter as in typical *parvus*. In *parvus* (pl. 1, figs. 1-3), the whorls are typically in the same plane, the aperture is oblong or long ovate and the sutures are impressed but not channelled. The umbilical region is also less impressed and has a "reamed out" appearance.

Height at aperture, 1.00; greatest diameter, 3.00 mm. Holotype.

Height at aperture, 1.00; greatest diameter, 3.00 mm.

*Contribution from the Museum of Natural History, University of Illinois, No. 1.

Height at aperture, .80; greatest diameter, 2.75 mm. Cotype.

Height at aperture, .80; greatest diameter, 2.50 mm. Cotype.

Holotype, number Z 10772 and paratypes number Z 10773, Museum of Natural History, University of Illinois. Cotypes of *urbanensis* and *altissimus* have been placed in A. N. S. Phila.

About 40 specimens of this form of *parvus* occur in the marl collections taken from the University of Illinois campus. The characteristics mentioned above appear to be very constant and the race or variety of *parvus* seems distinguishable enough for a distinct name. There were none of the *parvus* form in the material. This may be a Pleistocene species that has become extinct. Nothing similar has been seen in other marl collections available for study, but it would seem that it should be looked for in marl deposits, especially the older marl beds overlying the earlier drift sheets, or in deposits between these sheets—interglacial.

Planorbis altissimus n. sp. Pl. VII, figs. 7-10.

Shell depressed, with flatly rounded periphery which is placed below the center of the whorl; lines of growth fine, crowded, but surface without spiral ornamentation; whorls 4, regularly increasing in diameter, sloping flatly to the rounded periphery; spire whorls sunken below the general level of the surface, the whorls forming a rather sharp v-shaped suture, causing the shell to resemble a miniature *Planorbis antrosus* and producing a subacute carina on the upper surface of the whorls; base of shell deeply concave, forming a wide, saucer-shaped depression and umbilicus; the earlier whorls are carinate on the under side but the last whorl is rounded; the last half of the last whorl is markedly deflected, forming a contact with but half of the preceding whorl; aperture roundly ovate, shouldered above, the dorsal margin much produced over the ventral margin, the parietal callus joining the margins and causing the aperture to be continuous.

Height at aperture, 2.00; greatest diameter, 4.50 mm. Holotype.

Height at aperture, 1.75; greatest diameter, 4.25 mm. Cotype.

Height at aperture, 2.00; greatest diameter, 4.00 mm. Cotype.

Height at aperture, .90; greatest diameter, 2.00 mm. (young, 3 whorls).

Holotype; number Z 10775 and cotypes number Z 10776, Museum of Natural History, University of Illinois.

This small Planorbis is related to *deflectus*, but differs markedly in the form of the upper whorls which are more sharply carinated, and in the spire which is more sunken below the general level of the whorls. The umbilical region is deeper and the aperture is higher than wide. The lower part of the body whorl is more exposed below the first half of this whorl than in *deflectus*. Young specimens very strongly resemble *Planorbis campanulatus* in form.

Specimens of *deflectus* from marl deposits in Milwaukee (30th Street) Wisconsin, have occasional individuals that somewhat resemble *altissimus* in the greatly deflected last whorl but these are otherwise quite different. The new species may be looked for in marl deposits associated with *Galba obrussa decampi* and the Pisidia peculiar to the northern marl beds. Only 5 adult and 9 immature specimens occurred in the Urbana marl deposit and the new species was not, seemingly, a common inhabitant of the pond or lake.

The new forms described above occurred in a lot of postglacial fossils found in a deposit on the campus of the University of Illinois, in a ditch and in excavations for the basement of the new greenhouses. The shells were about four feet below the surface, in a deposit of marl underlying two feet of black, clayey soil. The fauna contains several species which now have a more northern range, as *Pisidium costatum, P. tenissimum calcareum, Valvata sincera*, and *Galba obrussa decampi*, and there is reason to believe that the pond in which these fossils lived occupied a kettle hole on the inner face of the Champaign moraine when the ice of the late Wisconsin glaciation was at or near Chicago. If this is so, then the

deposit is interglacial between the early and late Wisconsin invasions. A paper covering this point is in preparation.

EXPLANATION OF FIGURES, PLATE VII.

1-3. *Planorbis parvus* Say. Owasco Lake, N. Y. X9
4-6. *Planorbis parvus urbanensis* Baker, new variety. X9
7. *Planorbis altissimus* Baker, young. X9.
8-10. *Planorbis altissimus* Baker, new species. X7.

MOLLUSKS INFESTED WITH PARASITIC WORMS.

BY FRANK C. BAKER.

While carrying on biological work for the New York State College of Forestry at Oneida Lake in the fall of 1917, many animals were examined to ascertain the degree of parasitation by worms. The hosts studied included fish, birds, batrachians, reptiles, and mollusks. Among the latter many interesting cases occurred, both of infestation and absence of infestation, the degree of infestation varied from none to fifty per cent. Of the twelve species examined, five were without trace of parasites and seven were infested in varying degrees. It is noteworthy that none of the Amnicolidae or Valvatidae were parasitized, and that no worms were found in the small Planorbes (*parvus* and *hirsutus*). Of those infested, five are fresh water pulmonates. The examinations were carried on under the direction of Dr. H. S. Pratt, of Haverford College. The table below indicates the species infested and the degree of infestation. All are trematode worms the species of which have not yet been determined.

Bythinia tentaculata 17 examined; no worms.
Amnicola limosa 20 examined; no worms.
Valvata tricarinata 20 examined; no worms.
Planorbis parvus 3 examined; no worms.
Planorbis hirsutus 7 examined; no worms.
Planorbis antrosus 2 examined; 1 with cercariae, 1 without.